

SECRETTID/TAB - 25/66
15 March 1966

MEMORANDUM FOR THE RECORD

SUBJECT: AP-3 Analytical Stereo Plotter

1. On 9 March 1966 [] attended a meeting with [] at the ASP convention. The purpose of this meeting was to resolve the optical problems of the AP-3, and to clarify the misunderstanding on the delivery date of the Analytical Plotter.

2. It was evident at this meeting that [] had done extensive research since our visit [] on the optics and optical subsystem of the AP-3. [] discussed the actual optical system that is to be employed on the AP-3 instead of the previously discussed theoretical optics. The optical train will be made up of three systems. The first system is the telescopic lenses which include a 2.5x main lens. The second system is the zoom optics which has variable ratios of 2:1 to 4:1. The third system is the 10x exit pupil system. Through the use of these optical systems and a two-step magnification system, the instrument will have magnification ranges of 25-50x and 50-100x. The possibility exists that the main lens cones provided with the AS11A may be adapted to fit the AP-3, thus providing additional magnification ranges to the AP-3 of 12-24x, 20-40x, and 28-56x.

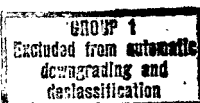
3. To incorporate a 2.5x main lens into the optical system it is necessary to lengthen the cone that holds the lens under the photo plate. This longer cone will cause the following restriction on mechanical kappa:

1. 0° to 3° kappa will reduce the workable plate area from 9 x 9 inches to $8\frac{1}{2}$ x $8\frac{1}{2}$ inches.

2. 3° to 5° to $8\frac{1}{4}$ x $8\frac{1}{4}$ inches

3. 5° - 9° to 8 x 8 inches

4. [] to give a tentative delivery date for the AP-3. [] said "he felt the instrument would be ready for pick-up by the end of May."

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5. [] thought the scheduling of the course for programmers should be delayed to the end of June.

6. On 10 March 1966, []

Here a conference was held with [] on the application of [] anamorphic optical design to the AP-3. [] was satisfied that the anamorphics could be used in conjunction with the AP-3 optics. [] will submit [] a proposal for the anamorphic unit and adapters to the AP-3. The proposed way to use the anamorphic unit will be to interchange the unit with the eyepieces of the AP-3.

[]
Production Section
Technical Analysis Branch

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- 1 - Asst. for P& []
- 1 - TID/TAB/PS - []
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